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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte JAMES P. JANIELLO and CHRISTOPHER WARD*

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Appeal 2009-005843  
Application 09/938,147  
Technology Center 2400

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Before: JAY P. LUCAS, DEBRA K. STEPHENS, and  
JAMES R. HUGHES, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellants appeal under 35 U.S.C. § 134(a) (2002) from a final rejection of claims 1-3, and 15-28. Claim 14 has been canceled (App. Br. 2). We have jurisdiction under 35 U.S.C. § 6(b) (2008).

We AFFIRM.

### *Introduction*

According to Appellants, the invention is a system and method for sharing information stored in a client-side cache among multiple users (Spec. 1). Digital content is distributed to multiple users where at least one of the user is a broadcast-enabled user that receives content that will be stored in a client-side cache over a broadcast connection (Spec. 2, § Summary of the Invention). The broadcast-enabled user shares the cached content with other users over a point-to-point connection (*id.*).

### STATEMENT OF CASE

#### *Exemplary Claims*

Claims 1 and 21 are exemplary claims and are reproduced below:

1. A method for storing digital content in a client-side cache, said method comprising the steps of[:]

receiving content broadcast to a client via a wireless broadcast connection, wherein said client is a machine that serves one or more users on a local area network;

storing said received content in said client-side cache based on a user profile; and

making said content in said client-side cache available to other clients.

21. An article of manufacture for storing digital content in a client-side cache, comprising:

a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to receive content broadcast from a central server to a client via a wireless broadcast connection, wherein said client is a machine that serves one or more users on a local area network;

a step to store said received content in said client-side cache based on a user profile; and

a step to make said content in said client-side cache available to other clients.

*Prior Art*

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Carter            US 6,026,474            Feb. 15, 2000

Humphrey        US 2002/0129116 A1        Sep. 12, 2002  
    Filed Mar. 15, 1999

Mao            US 6,886,178 B1            Apr. 26, 2005  
    Filed Jul. 29, 1998

*REJECTIONS*

Claims 21-23 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. (Ans. 3-4).

Claims 1-13 and 15-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carter and Humphrey. (Ans. 4-17).<sup>2</sup>

Claim 28 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Carter and Mao. (Ans. 17-18).

#### GROUPING OF CLAIMS

(1) Appellants argue the 35 U.S.C. § 101 rejection of claims 21-23 collectively as a group (App. Br. 7-8). We select claim 21 as the representative claim and consider the § 101 rejection of claims 21-23 collectively.

(2) Appellants argue all of the independent claims, 1, 9, 15, 18-23, and 28 collectively as a group on the basis of claim 1 (*id.* at 8-9). We accept independent claim 1 as the representative claim. Claims 2-8 and 24 dependent on independent claim 1 and claims 10-13 and 26 dependent on independent claim 9 were not argued separately. We will, therefore, treat independent claims 9, 15, and 18-23 and dependent claims 2-8, 24, 10-13, and 26 as standing or falling with representative independent claim 1. Claim 28 was argued on the basis of claim 1. We address claim 28 individually based on these arguments.

(3) Appellants argue dependent claims 25 and 27 separately (*id.* at 10). We will, therefore, treat claims 25 and 27 on an individual basis.

*See* 37 C.F.R. § 41.37(c)(1)(vii).

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<sup>2</sup> The Examiner withdrew the rejection of claims 1-13 and 15-27 for obviousness over Carter and Mao for being unnecessarily cumulative (Ans. 3). The Examiner did maintain the rejection of claim 28 for obviousness over Carter and Mao (*id.*).

## ISSUE 1

### *35 U.S.C. § 101): claims 21-23*

Appellants assert their invention is not drawn to non-statutory subject matter because “contrary to the Examiner’s assertion, *a transmission medium is a tangible entity, consisting of radio waves, light waves, electronic signals, etc.*” and that “[c]laims 21-23 require a *computer readable medium having computer readable code means embodied thereon*, and are therefore limited to *tangible* embodiments” (App. Br. 7, emphasis original).

In response, the Examiner maintains the claims are nominally directed to an article of manufacture (Ans. 18 and 19). However, the body of the claim recites only a “computer readable medium” storing computer code (*id.*).

The specification clearly states that the term “computer readable medium” is intended to include a “transmission medium” . . . “[t]hese embodiments are non-statutory since they do not fall within any of the four statutory categories including “manufactures.”

(Ans. 18-19).

*Issue 1:* Has the Examiner erred in concluding that claims 21-23 are directed to no-statutory subject matter?

## FINDINGS OF FACT (FF)

### *Appellants' Invention*

(1) The computer readable medium may be a ... transmission medium (e.g., .... A wireless channel using time-division multiple access, code-division multiple access, or other radio-frequency channel).

## ANALYSIS

Under § 101, there are four categories of subject matter that are eligible for patent protection: (1) processes; (2) machines; (3) manufactures; and (4) compositions of matter. 35 U.S.C. § 101. While the scope of patentable subject matter encompassed by § 101 is “extremely broad” and intended to “‘include anything under the sun that is made by man,’” it is by no means unlimited. *In re Comiskey*, 554 F.3d 967, 977 (Fed. Cir. 2009) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)). For example, laws of nature, abstract ideas, and natural phenomena are excluded from patent protection. *Diamond v. Diehr*, 450 U.S. 175, 188 (1981).

Appellants argue that a transmission medium is a tangible entity. However, signals are unpatentable under § 101. *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007), *reh'g denied en banc*, 515 F.3d 1361 (Fed. Circ. 2008), *cert. denied*, 129 S. Ct. 70 (2008). “A transitory, propagating signal . . . is not a ‘process, machine, manufacture, or composition of matter.’ Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101.” *Id. at* 1357 “If a claim covers material not found in any of the four statutory categories, that claim falls

outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful.” *Id.* at 1354.

Appellants have set forth that the computer readable medium may be a transmission medium (e.g., a wireless channel using time-division multiple access, code-division multiple access, or other radio-frequency channel) (FF 1).

According to U.S. Patent & Trademark Office (USPTO) guidelines:

A claim that covers both statutory and non-statutory embodiments . . . embraces subject matter that is not eligible for patent protection and therefore is directed to non-statutory subject matter. . . . For example, a claim to a computer readable medium that can be a compact disc or *a carrier wave* covers a non-statutory embodiment and therefore should be rejected under § 101 as being directed to non-statutory subject matter (underline omitted).

U.S. Patent & Trademark Office, *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 2009, at 2, available at [http://www.uspto.gov/web/offices/pac/dapp/opla/2009-08-25\\_interim\\_101\\_instructions.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/2009-08-25_interim_101_instructions.pdf) (“Interim Instructions”).

The broadest reasonable interpretation of a claim drawn to a computer readable medium . . . typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. . . . When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter.

David J. Kappos, *Subject Matter Eligibility of Computer Readable Media*, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010) (“OG Notice”), available at <http://www.uspto.gov/web/offices/com/sol/og/2010/week08/TOC.htm#ref20>

In addition, the mere mention of “an article of manufacture” in the preamble does not by itself impart any structural hardware component to the actual recitation in the body of these claims. Accordingly, we sustain the Examiner’s § 101 rejection of representative claim 21 which calls for a computer program code stored on a computer readable medium—a medium which encompasses patent-ineligible signals given its broadest reasonable interpretation. *See* Interim Instructions, at 2; *see also Nuijten*, 500 F.3d at 1355; OG Notice.

Appellants did not separately argue claims 22 and 23 and thus, claims 22 and 23 fall with claim 21. We are therefore not persuaded that the Examiner erred in rejecting representative claim 21 under § 101, and claims 22 and 23 not separately argued.

## ISSUE 2

*35 U.S.C. § 103(a): claims 1-13, 15-24, 26 and 28*

Appellants assert their invention is not obvious over Carter and Humphrey because neither reference alone nor in any combination thereof teach or suggest storing content based on a user profile as required by independent claims 1, 9, 15, 18-23, and 28 (App. Br.8-9). Specifically, Appellants contend the “well known definition of user profile” is that “user profiles were represented as a list of likes and dislikes with associated probability values reflecting the degree of interest” (App. Br. 8 and 9; Reply

Br. 3). Appellants contend Carter moreover, does not teach or suggest that data access patterns are lists or that the access patterns indicate a degree of interest of a user and thus, do not provide a profile of a user (App. Br. 9; Reply Br. 3).

The Examiner asserts that the claims “contain no language requiring the presence of a list or anything to ‘indicate a degree of interest of a user’” and, “it is clear that the term ‘user profile’ has not been defined by the specification or the claims” and therefore must be given its broadest reasonable interpretation consistent with the specification. The Examiner therefore, finds that Carter teaches that the received content is stored in a cache based on various factors including “data access patterns” and that these “data access patterns” are analogous to user profiles and reflect patterns of particular users.

Furthermore, the Examiner finds data access patterns taught by Carter indicates the access patterns of a single user, each of whom has a separate, local cache which is shared with other users in the group (Ans. 21). The Examiner then finds Carter sharing of information from a plurality of local caches where each local cache is filled based on access patterns of a user associated with that cache discloses user profiles (*id.*).

*Issue 2:* Have Appellants shown the Examiner erred in finding that Carter teaches or suggests storing content based on a user profile as recited in independent claim 1 and commensurately recited in independent claims 9, 15, 18-23, and 28?

## FURTHER FINDINGS OF FACT (FF)

### *Appellants' Invention*

(2) “Each broadcast-enabled client computer 300 stores a subset of [requested program material] based on a user profile 260. For example, the user profile 260 might provide a list of the users[‘] most popular sites.” (Spec. 3, ll. 10-12).

### *Carter*

(3) Carter teaches a method and system for a shared client-side Web cache provided by implementing a file system shared between nodes. “Each browser application stores cached data in files stored in a globally addressable data store. Since the file system is a shared one, the client-side Web caches are also shared.” (Abstract).

(4) A cache system may operate one of the local persistent memory devices as a cache memory. The cache memory stores data signals that are associated with recently accessed portions of the addressable memory space.

(5) The system can also include a migration controller that selectively moves portions of the addressable memory space between the local persistent memory devices of the multiple computers. “The migration controller can determine and respond to data access patterns, resource demands or any other criteria or heuristic suitable for practice with the invention.” Thus, the migration controller is able to balance loads on the network, and move data to nodes from which it is commonly accessed. (col. 14, ll. 33-46).

## ANALYSIS

Appellants' arguments that "user profile" has the narrow reading presented by Appellants are unpersuasive. Appellants do not define user profile in their Specification, but instead describe only examples of what a user profile might include (FF 2). Appellants also present a technical report (App. Br. 8 and 9; Reply Br. 3).

"In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art." *Brookhill-Wilk I, LLC. v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 (Fed. Cir. 2003) (internal citations omitted). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313.

We do not accept Appellants' proffered definition, but instead, taking the ordinary and customary meaning, determine user profile means data about a user.

We find Carter teaches or suggests content is stored based on a user profile. Specifically, Carter teaches that a file system is shared between nodes (FF 3). Carter additionally teaches that a migration controller in the system can determine and respond to data access patterns (FF 5). This allows the migration controller to balance loads on the network and move

data to nodes from which it is commonly accessed (*id.*). Thus, we find Carter teaches or suggests that data is stored based on a user's profile – information that the user commonly accesses that data.

Appellants have not shown the Examiner erred in finding that Carter teaches or suggests storing content based on a user profile as recited in independent claim 1 and commensurately recited in claims 9, 15, and 18-23.

Claim 28, rejected under 103 for obviousness over Carter and Mao, was not separately argued, but grouped with claim 1, by Appellants, and argued on the same basis – that Carter does not teach or suggest storing content based on a user profile. As discussed above, we find that Carter teaches or suggests storing content based on a user profile as recited in independent claim 28.

Accordingly, Appellants have failed to persuade us of error in the Examiner's conclusions that the invention as recited in claims 1-13, 15-24, and 26 is obvious over Carter and Humphrey and the invention as recited in claim 28 is obvious over Carter and Mao.

### ISSUE 3

#### *35 U.S.C. § 103(a): claims 25 and 27*

Appellants assert their invention is not obvious over Carter, Humphrey, and Mao because neither reference nor any combination thereof disclose or suggest "wherein said received content was predicted to be of interest to a user" as recited in claim 25 and "wherein said content in said remote client cache was predicted to be of interest to a user" as recited in claim 27 (App. Br. 10). Specifically, Appellants contend Humphrey teaches

determining what information is of global interest to the Internet community, not what is predicted to be of interest to a user (App. Br. 10; Reply Br. 4).

The Examiner finds that, as Appellants admit, Humphrey teaches determining what information is of global interest to the Internet community (Ans. 22). The Examiner then finds that information that is of global interest is information predicted to be of interest to each user that is sent the information (*id.*). Furthermore, the Examiner states that although Humphrey does not know whether the information will be of interest to each and every user, Humphrey predicts that it will be of interest to single users because it is of interest to a large number of users (Ans. 22).

*Issue 3:* Has the Appellants shown the Examiner erred in finding Humphrey teaches or suggests the content that has been received or is in the remote client cache is predicted to be of interest to a user as recited in claims 25 and 27?

#### FURTHER FINDINGS OF FACT (FF)

##### *Humphrey*

(6) Humphrey teaches a method and system for a comprehensive global information network broadcasting system used with Internet service providers. Information to the Internet service providers is updated through the use of high speed satellite links directly to the local Internet service provider from a centralized location. (Abstract).

(7) The Internet's performance may be improved by improving the cache hit rate for at least some of the caches in the network. The network conserves capacity when a cache services the user's request for information,

because an end-to-end connection is not required to service the request. Determining interest in the data on the network as a whole or as a sample thus determining the popularity as a whole can improve the selection of data for storage in a local cache. To achieve this, the system measures the number of access requests for information and type of information not available on the local caches (local cache miss information). “The system may then examine the local cache miss information from some or all of the local sites and determine what information is of global interest to the Internet community.” The system may then determine by a variety of ways information that would be a good selection for storage into local caches. (Pg. 2, ¶ [0024]).

(8) A broadcast system may improve the Internet operation by taking the information or data that has been determined to be of sufficient interest and inputting this information into local caches and broadcasting that information and data to the local cache systems. As a result, the network would be relieved from the identified problem of transporting replicated data and redundant information across network backbones. (Pg. 2, ¶[0025]).

## ANALYSIS

Both claim 25 and claim 27 recite intended results regarding the information of the contents. Specifically, both recite that the content was predicted to be of interest to a user. No functionality is recited to make that prediction. Accordingly, we find these limitations carry no patentable weight.

Moreover, we find Appellants' arguments that Humphrey does not teach or suggest that the content was predicted to be of interest to a user unpersuasive. We find Humphrey teaches or suggests the system determines what information is of global interest to the Internet community and stores that into local caches (FF 7 and FF 8). Thus, since the information is determined to be of global interest to the community, the information must be of interest to at least one of the members of the community. As a result, we find that the information received or in the remote client cache was predicted to be of interest to a user.

Additionally, the Federal Circuit has repeatedly emphasized that an indefinite article "a" or "an" in patent parlance carries the meaning of "one or more" in open-ended claims containing the transitional phrase "comprising." *See Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999); *Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023 (Fed. Cir. 1997); *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1575-76 (Fed. Cir. 1993). Since independent claims 1 and 9 from which claims 25 and 27 depend, respectively contains the transitional phrase "comprising" and claims 25 and 27 each recite "a user," Appellants' argument is not commensurate in scope with the claim language.

Therefore, we find Appellants have not shown the Examiner erred in finding Humphrey teaches or suggests the content that has been received or is in the remote client cache is predicted to be of interest to a user. Accordingly, Appellants have failed to persuade us of error in the Examiner's conclusions that Carter and Humphrey render the invention as recited in claims 25 and 27 obvious.

## CONCLUSION

Appellants have not shown the Examiner erred in concluding that claims 21-23 are directed to non-statutory subject matter. Accordingly, Appellants have not shown that the Examiner erred in rejecting claims 21-23 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Appellants have not shown the Examiner erred in finding that Carter and Humphrey, either alone or in combination, teaches or suggests storing content based on a user profile as recited in independent claim 1 and commensurately recited in independent claims 9, 15, and 18-23. Dependent claims 2-8, 24, 10-13, and 26 were not argued separately. Accordingly, Appellants have not shown the Examiner erred in rejecting claims 1-13, 15-24, and 26 under 35 U.S.C. § 103(a) for obviousness over Carter and Humphrey.

Appellants have not shown the Examiner erred in finding that Carter and Mao, either alone or in combination, teaches or suggests storing content based on a user profile as recited in independent claim 28. Accordingly, Appellants have not shown the Examiner erred in rejecting claim 28 under 35 U.S.C. § 103(a) for obviousness over Carter and Mao.

Appellants have not shown the Examiner erred in finding Carter and Humphrey, either alone or in combination, teaches or suggest “wherein said received content was predicted to be of interest to a user” (claim 25) and “wherein said content in said remote client cache was predicted to be of interest to a user” (claim 27). Thus, Appellants have not shown the Examiner erred in finding claims 25 and 27 are obvious over Carter and Humphrey. Accordingly, Appellants have not shown the Examiner erred in

Appeal 2009-005843  
Application 09/938,147

rejecting claims 25 and 27 under 35 U.S.C. § 103(a) for obviousness over Carter and Humphrey.

## DECISION

The Examiner's rejection of claims 21-23 under 35 U.S.C. § 101 as being drawn to non-statutory subject matter is affirmed.

The Examiner's rejection of claims 1-13 and 15-27 under 35 U.S.C. § 103(a) as being obvious over Carter and Humphrey is affirmed.

The Examiner's rejection of claim 28 under 35 U.S.C. § 103(a) as being obvious over Carter and Mao is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2009).

## AFFIRMED

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RYAN, MASON & LEWIS, LLP  
1300 POST ROAD  
SUITE 205  
FAIRFIELD CT 06824